

**THAT WHICH IS CLAIMED:**

1. A system management apparatus for retrieving and displaying SMBIOS data relating to the configuration and components of a computing system to a user via a display terminal comprising:

5           a database of SMBIOS structures stored on a computer-readable medium containing data related to the configuration of the computing system and components of the computing system;

          a utility stored on a computer-readable medium, which in response to commands from a user, retrieves data from said database and displays the data on the display  
10       terminal; and

          a template file stored on a computer-readable medium separate from said utility, containing information for interpreting and displaying the SMBIOS data retrieved by said utility from said database, wherein said template file eliminates the requirement that the information for interpreting and displaying the data stored in said database be contained  
15       in the utility.

2. An apparatus according to Claim 1, wherein said template file includes at least two types of keys for interpreting the information stored in said template file.

3. An apparatus according to Claim 2, wherein said template file includes data descriptor keys that define the information stored in said template file.

20           4. An apparatus according to Claim 3, wherein said template file includes data descriptor keys that indicate the type of data retrieved from the database and a format in which it should be displayed.

5. An apparatus according to Claim 3, wherein said template file includes individual data descriptor keys for defining raw data and data strings.

25           6. An apparatus according to Claim 3, wherein said template file includes a data descriptor key for defining a bit field having individual bits representing information based on whether the bit is a one or a zero.

7. An apparatus according to Claim 6, wherein the bit field has N bits where less than N bits of the bit field are defined, and wherein said template file further includes a data descriptor key indicating to said utility the last defined bit position in the bit field such that said template file does not include and said utility does not search for undefined  
5 bits of the bit field in the template file.

8. An apparatus according to Claim 3, wherein said template file includes a data descriptor key for defining an enumerated data value, wherein the numerical value of the data represents a defined setting in the computing system and components.

9. An apparatus according to Claim 8, wherein the enumerated data has N  
10 possible values, and wherein said template file further includes a data descriptor key indicating to said utility a last defined data value such that said template file does not include and said utility does not search for undefined values in the template file.

10. An apparatus according to Claim 3, wherein said template file includes a data descriptor key for defining multiple groups of bits within a bit field representing a setting  
15 of the computing system and components.

11. An apparatus according to Claim 10, wherein a group of bits in the bit field has N bits and can define  $2^N$  values, where less than  $2^N$  values are defined, and wherein said template file further includes a data descriptor key indicating to said utility a last defined value for each group of bits such that said template file does not include and said  
20 utility does not search for undefined bit field group values.

12. An apparatus according to Claim 3, wherein said template file includes a data descriptor key for defining a data value representing a count indicating a number of data strings.

13. An apparatus according to Claim 2, wherein said template file includes  
25 information in the form of structure definitions used to interpret and display the data stored in said database.

14. An apparatus according to Claim 13, wherein said template file includes process control keys used to interpret the structure definitions stored in said template file.

15. An apparatus according to Claim 14, wherein said template file includes a process control key indicating a beginning of a SMBIOS structure definition.

5           16. An apparatus according to Claim 14, wherein said template file includes a process control key indicating the end of the template file.

17. An apparatus according to Claim 14, wherein said template file includes a process control key indicating to said utility the number of times a group of fields in a structure definition is repeated and the size of the repeated area in bytes.

10           18. An apparatus according to Claim 14, wherein said template file includes process control keys indicating a beginning and ending of a group of repeated fields in a structure definition.

15           19. An apparatus according to Claim 1 further comprising a second template file containing structure definitions for data stored in said database by an original equipment manufacturer.

20           20. A method for creating a template file for use in interpreting and displaying SMBIOS data relating to the configuration and components of a computing system to a user via a display terminal comprising:

            providing a database of SMBIOS structures stored on a computer-readable medium containing data related to the configuration of the computing system and components of the computing system;

            providing a utility stored on a computer-readable medium, which in response to commands from a user, retrieves data from the database and displays the data on the display terminal; and

25           creating a template file stored on a computer-readable medium separate from the utility, containing information for interpreting and displaying the data retrieved by the utility from the database, wherein the template file eliminates the requirement that the

information for interpreting and displaying the data stored in the database be contained in the utility.

21. A method according to Claim 20, wherein said creating step creates a template file that includes at least two types of keys for interpreting the information stored in the  
5 template file.

22. A method according to Claim 21, wherein said creating step creates a template file that includes data descriptor keys that define the information stored in the template file.

23. A method according to Claim 22, wherein said creating step creates a template  
10 file that includes data descriptor keys that indicate the type of data retrieved from the database and the format in which it should be displayed.

24. A method according to Claim 22, wherein said creating step creates a template file that includes individual data descriptor keys for defining raw data and data strings.

25. A method according to Claim 22, wherein said creating step creates a template  
15 file that a data descriptor key for defining a bit field having individual bits representing information based on whether the bit is a one or a zero.

26. A method according to Claim 25, wherein the bit field has N bits where less than N bits of the bit field are defined, and wherein said creating step creates a template file that further includes a data descriptor key indicating to the utility the last defined bit  
20 position in the bit field such that the template file does not include and the utility does not search for undefined bits of the bit field in the template file.

27. A method according to Claim 22, wherein said creating step creates a template file that includes a data descriptor key for defining an enumerated data value, wherein the numerical value of the data represents a defined setting in the computing system and  
25 components.

28. A method according to Claim 27, wherein the enumerated data has N possible values, and wherein said creating step creates a template file that further includes a data

descriptor key indicating to the utility the last defined data value such that the template file does not include and the utility does not search for undefined values in the template file.

29. A method according to Claim 22, wherein said creating step creates a template  
5 file that includes a data descriptor key for defining multiple groups of bits within a bit field representing a setting of the computing system and components.

30. A method according to Claim 29, wherein a group of bits in the bit field has N bits and can define  $2^N$  values, where less than  $2^N$  values are defined, and wherein said creating step creates a template file that further includes a data descriptor key indicating  
10 to the utility the last defined value for each group of bits such that said template file does not include and said utility does not search for the undefined bit field group values.

31. A method according to Claim 22, wherein said creating step creates a template file that includes a data descriptor key for defining a data value representing a count indicating a number of data strings.

32. A method according to Claim 21, wherein said creating step creates a template  
15 file that includes information in the form of structure definitions used to interpret and display the data stored in the database.

33. A method according to Claim 32, wherein said creating step creates a template  
20 file that includes process control keys used to interpret the structure definitions stored in the template file.

34. A method according to Claim 33, wherein said creating step creates a template file that includes a process control key indicating a beginning of an SMBIOS structure definition.

35. A method according to Claim 33, wherein said creating step creates a template  
25 file that includes a process control key indicating the end of the template file.

36. A method according to Claim 33, wherein said creating step creates a template file that includes a process control key indicating to the utility that the number of times a

group of fields in a structure definition is repeated, and the size of the repeated area in bytes.

37. A method according to Claim 33, wherein said creating step creates a template file that includes process control keys indicating a beginning and ending of a group of repeated fields in a structure definition.

38. A method according to Claim 20 further comprising the step of creating a second template file containing structure definitions for data stored in said database by original equipment manufacturer.

39. A system management apparatus for use with system management BIOS software for retrieving and displaying SMBIOS data relating to the configuration and components of a computing system to a user via a display terminal comprising:

system management BIOS software stored on a computer-readable medium comprising:

a database of SMBIOS structures containing data related to the configuration of the computing system and components of the computing system; and information for interpreting and displaying the data stored in said database;

a utility stored on a computer-readable medium, which in response to commands from a user, retrieves data from said database and displays the data on the display terminal; and

a template file stored on a computer-readable medium separate from said utility, containing said information for interpreting and displaying the data retrieved by said utility from said database, wherein said template module eliminates the requirement that said information for interpreting and displaying the data stored in said database be contained in the utility.